



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/626,568	07/27/2000	Kenneth John Aagaard	CBS 2000-01	9613

718 7590 03/28/2006

REED SMITH LLP

P.O. BOX 488

PITTSBURGH, PA 15230-0488

EXAMINER
----------

YE, LIN

ART UNIT	PAPER NUMBER
----------	--------------

2622

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/626,568

Applicant(s)

AAGAARD ET AL.

Examiner

Lin Ye

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 27 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicants' arguments with respect to claims 1-2 and 4-16 filed on 12/22/05 have been considered but are moot in view of the new ground(s) of rejection.

Although a new ground of rejection has been used to address additional limitations that have been added to claim 1, a response is considered necessary for several of the applicants' arguments since the primary reference, Paff (U.S. Patent 5,164,827), will continue to be used to meet several of the claimed limitations.

In applicants' REMARKS (Status of the Claims), page 7, lines 23-24 and page 8, lines 1-2, the applicants argue that the examiner "almost completely ignores the amended portion of the claims in making his arguments. In fact, Paff is clearly distinguishable and is merely a general purpose security system patent" in the 1/27/05 Office Action.

The examiner disagrees. It should be noted that the Paff reference is the first time cited in the Office Action mailed on 1/27/05 for responding the new additional limitations that have been added to claims 1, 11 and 13 in the applicants' amendment filed on 9/13/04.

There are no applicant's arguments to the Paff reference instead of the Yuen reference (U.S. Publication 2002/0005902) in the amendment filed on 9/13/04. Additionally, the examiner clearly responded the arguments that "the Yuen reference clear states the system has multiple video cameras are used to automatically record sports events and other programming (See Yuen reference, page 1, [0002]). It should be noted that a **video camera-based security system is also considered as a video imaging system**" for the **unamended claim 7** in the

Art Unit: 2615

Office Action mailed on 1/27/05. The claim 1 is written broadly and only required “a video imaging system”. The examiner pointed out that the Paff’s video surveillance camera system (100) is considered as a video imaging system in the Office Action mailed on 1/27/05.

Therefore, this clearly shows the examiner has fully considered all the amendments and arguments filed by applicants.

In applicants’ REMARKS (Focal Length Control), page 8, line 13 through page 9, line 15, the applicants argue that the examiner statement “it is well known in the art that when adjusting the focal length on the camera, it affects the zoom... the zoom adjustment can be considered as the focal length adjustment” is untrue.

In response, the two references (1<sup>st</sup> reference: Nikon Coolpix 990 User Guide, URL: <http://www.cs.mtu.edu/~shene/DigiCam/User-Guide/990/ON-CAMERA-LENS/optical-zoom.html>; and 2<sup>nd</sup> reference: Glossary: Optical: Focal length, URL: <http://www.dpreview.com/learn/?/key=focal+length>) are cited herein as evidence to support examiner’s statement. The focal length of a lens is defined as the distance in mm from the optical center of the lens to the focal point. A change in focal length allows user to come closer to the subject (zoom in) or to move away from it (zoom out). Optical Zoom= maximum focal length/minimum focal length. Therefore, the zoom adjustment of the Paff reference is considered as the focal length adjustment as cited in claim 1.

In applicants’ REMARKS (The “Spin” User Controller), page 9, line 16 through page 10, line 27, the applicants argue that no support exists in the Paff reference as disclosed that the “user interface” was claimed to include “ control to select successive additional camera.... to

Art Unit: 2615

effectuate a partial rotation around the object ...the rotation through successive additional camera images” as recited in claim 1 in prior to the present amendment.

The examiner disagrees. The claim 1 in prior to the present amendment is only required “select successive additional camera images to effectuate a **partial rotation around the object** of interest”. The Paff reference shows in Figure 1, the Master camera and slave cameras (S1-S5) **surround** the object of interest (subject) for providing video images of the object of interest (subject) from **different spatial perspectives**, wherein said user interface (monitor station 11) includes a control (automatically select video from these in-range slave cameras) to select successive additional camera images to effectuate a partial rotation around the object of interest (subject) in the display (e.g., the operator is therefore provided with **multiple views of the subject from different spatial perspectives** that considered as to effectuate a **partial rotation around** the object of interest in the display 11A-D, see Col. 5, lines 5-17) such that size of the object of interest (subject) remains generally equal (the subject is viewed at approximately the **same magnification**, see Col. 8, lines 5-8) throughout the rotation through successive additional camera images as shown in Figures 2 and 4 (see Col. 7, lines 40-65, and Col. 8, lines 16-22).

In applicants’ REMARKS (Claim Amendments), page 11, line 1 through page 12, line 2, the applicants has amended the claim 1 to **add new limitations**, such as “ each successive one of said plurality of additional cameras being **adjacent** to a preceding camera, by moving through said plurality of **adjacent** additional camera images”. Therefore, Applicant’s arguments have been fully considered and are persuasive. Therefore, the rejection has been

Art Unit: 2615

withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Jain et al. U.S. patent 5,729,471.

In applicants' REMARKS (Request For Interview), page 12, lines 3-19, the applicants submitted Applicant Initiated Interview Request Form with the amendment filed on 12/22/-05 together.

In response, the examiner clearly understands the Applicants' arguments based on the amendment filed on 12/22/05; therefore the interview is unnecessary this time. The examiner encourages the Applicants to call the examiner at (571) 272-7372 for scheduling an interview before submit any formal amendment to USPTO Office in future, so that the interview can be scheduled on time and avoiding any duplicate works.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 5, 7-9 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paff U.S. Patent 5,164,827 in view of Jain et al. U.S. Patent 5,729,471.

Referring to claim 1, the Paff reference discloses in Figures 1 and 6, a video imaging system (video surveillance camera system 100, see Col. 3, lines 16-22), the system

comprising: a master video camera (MD, see Col. 3, lines 23-25) for producing video images of a moving object of interest (e.g., the master video camera follows a moving Subject (S) as shown in Figure 2, see Col.6, lines 1-2 and Col. 7, lines 40-45); a plurality of additional video cameras (slave cameras SD1-SD5) each positioned at a different location surrounding the object of interest for producing additional video images of the object of interest from different spatial perspectives as shown in Figure 1 (See Col. 4, lines 10-17); a control system (controller 10 and a monitor station 11) for controlling said additional video cameras (SD1-SD5) in response to the master video camera (MD) to follow movement of the object of interest (S) (See Col. 7, lines 37-49), wherein said control system includes a means for controlling the focal length (e.g., zoom adjustment of the Paff reference is considered as the focal length adjustment as cited in claim 1, see comments from *Response to Arguments* section) of each additional camera such that size of the moving object of interest is generally equal in each of the master and additional cameras (e.g., the slave camera SD1-S5 responsive to the information relating to the zooming status of the master camera MD, can then adjust their own zooming states or conditions so that the subject is viewed at approximately **the same magnification** as with the master camera MD, see Col. 8, lines 1-6); a recording system (monitor station 11) for recording the video images produced by the master camera and the additional cameras; the Master camera and slave cameras (S1-S5) **surround** the object of interest (subject) for providing video images of the object of interest (subject) from **different spatial perspectives**, wherein said user interface (monitor station 11) includes a control (automatically select video from these in-range slave cameras) to select successive additional camera images to effectuate a partial rotation around the object of interest

(subject) in the display (e.g., the operator is therefore provided with **multiple views of the subject from different spatial perspectives** that considered as to effectuate a **partial rotation around** the object of interest in the display 11A-D, see Col. 5, lines 5-17) such that size of the object of interest (subject) remains generally equal (the subject is viewed at approximately the **same magnification**, see Col. 8, lines 5-8) throughout the rotation through successive additional camera images as shown in Figures 2 and 4 (see Col. 7, lines 40-65, and Col. 8, lines 16-22).

However, the Puffer reference does explicitly show a detail about a single control device which is adapted to select successive video images from a plurality of additional cameras, each successive one of said plurality of additional cameras being **adjacent** to a preceding camera, in order to effectuate a partial rotation around the object of interest in the display by moving through said plurality of **adjacent** additional camera images, such that the size of the object of interest remains generally equal throughout the rotation through successive adjacent additional camera images.

The Jain reference teaches in Figures 1-2, 8, 16 and 18, a video imaging system can be used in sports or surveillance even, the system comprising: user interface includes a single control device (video control as shown in Figure 4, see Col. 21, lines 5-30) which is adapted to select successive video images from a plurality of additional cameras, each successive one of said plurality of additional cameras being **adjacent** to a preceding camera (cameras 1-3 and see Figure 8, Col. 24, lines 30-37), in order to effectuate a partial rotation around the object of interest in the display by moving through said plurality of **adjacent** additional camera images, such that the size of the object of interest remains generally equal throughout



the rotation through successive adjacent additional camera images (e.g., as shown in Figure 18, a multi-perspective perception system produce a partial rotation around the object of interest in the display by moving through the plurality of adjacent additional camera images of real world scene, the video images of the scene are selected and synthesized to three-dimensional video image, such that the size of the object of interest remains generally equal throughout the rotation through successive adjacent additional camera images in order to create a 3-D video image inherently, see Col. 31, lines 50-67, Col. 32, lines 40-46, Col. 33, lines 23-28 and Col. 40, lines 48-53). The Jain reference is evidence the one of ordinary skill in the art at the time to see more advantage for the video camera system selecting successive video images from a plurality of additional cameras, each successive one of said plurality of additional cameras being **adjacent** to a preceding camera so that a three-dimensional video model of the scene can be generated from those adjacent camera images in the real time (See Col. 9, lines 25-56). For that reason, it would have been obvious to the one of ordinary skill in the art at the time to modify the video camera system of Paff for providing a single control device which is adapted to select successive video images from a plurality of additional cameras, each successive one of said plurality of additional cameras being **adjacent** to a preceding camera, in order to effectuate a partial rotation around the object of interest in the display by moving through said plurality of **adjacent** additional camera images, such that the size of the object of interest remains generally equal throughout the rotation through successive adjacent additional camera images as taught by Jain .

Referring to claim 2, the Paff and Jain references disclose all subject matter as discussed in respected to claim 1, and the Paff reference discloses a monitoring unit (monitoring station

Art Unit: 2615

11) for transmitting signals representative of an operating status of the master camera (MD) to the control system (controller 10); and a plurality of positioning units (pan, tilt, focus and zoom motors 13-16) for positioning the additional cameras (SD1-SD5) in response to control signals from the control system (See Col. 4, lines 23-35).

Referring to claim 4, the Paff and Jain references disclose all subject matter as discussed in respect to claim 1, and the Jain reference teaches wherein the user interface permits the sequential selection of individual frames in the video images as shown in Figures 4 and 8.

Referring to claim 5, the Paff and Jain references disclose all subject matter as discussed in respect to claim 1, and the Paff reference discloses wherein the control system (10) comprises: a pan control, a tilt control, a focus control and a frame control (e.g., a master camera captures a frame image that has a coordinate position of subject, the control system 10 calculates the coordinate position of subject S relative to the master camera, see Col. 6, lines 5-10, and Col. 6, lines 39-55) for each of the additional video cameras (See Col. 7, lines 27-33, Col. 8, lines 1-15); and a computer processor for coordinating operation of the pan control, the tilt control, the focus control and the frame control for each additional video camera in response to position and focus parameters of the master video camera (See Col. 7, lines 49).

Referring to claim 7, the Paff and Jain references disclose all subject matter as discussed in respect to same comments to claim 1.

Referring to claim 8, the Paff and Jain references disclose all subject matter as discussed in respect to claim 1, and the Paff reference discloses storing the master video images and

the additional video images in memory (12), and selecting particular ones of the video images for display on monitors (11A-D).

Referring to claim 9, the Paff and Jain references disclose all subject matter as discussed in respected to same comment as with claims 7 and 4.

Referring to claim 11, the Paff and Jain references disclose all subject matter as discussed in respected to same comment as with claims 1 and 4.

Referring to claim 12, the Paff and Jain references disclose all subject matter as discussed in respected to same comment as with claims 1 and 4, and the Paff reference discloses displaying another one of the plurality of video images (e.g., any of monitors 11A-D can be selected to display another one of the plurality of video images).

Referring to claim 13, the Paff and Jain references disclose all subject matter as discussed in respected to same comment as with claims 1 and 4.

Referring to claim 14, the Paff and Jain references disclose all subject matter as discussed in respected to claim 1, and the Paff reference discloses wherein said successive additional camera images displayed during said rotation were all captured at the same time on the monitors (11A-D).

Referring to claim 15, the Paff and Jain references disclose all subject matter as discussed in respected to claim 1, and the Jain reference discloses wherein said successive additional camera images displayed during said rotation were captured sequentially in time as shown in Figures 17a-d.

Art Unit: 2615

4. Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paff U.S. Patent 5,164,827 in view of Jain et al. U.S. Patent 5,729,471 and Hayashi et al. U.S. Patent 6,160,544.

Referring to claim 6, the Paff and Jain references disclose all subject matter as discussed in respected claim 1, except that the Paff reference does not explicitly show each of the additional cameras also comprising a microphone for supplying signals representative of audio signals received by the microphones to the control system.

The Hayashi reference disclose in Figure 2, a video camera system comprising a plurality of cameras that have microphones; and video signals (containing audio signals picked up by the microphones) from the cameras that are directly supplied to video distributors (See Col. 4, lines 22-31). The Hayashi reference is evidence the one of ordinary skill in the art at the time to see more advantage for the video camera has a microphone build in so that the user can recording both image and audio signal together and transmitter to remote system for reviewing late. For that reason, it would have been obvious the one of ordinary skill in the art at the time to see each of the additional cameras also comprising a microphone for supplying signals representative of audio signals received by the microphones to the control system disclosed by Paff.

Referring to claim 10, the Paff, Jain and Hayashi references disclose all subject matter as discussed with respected to same comment as with claims 6 and 7.

Art Unit: 2615

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paff U.S. Patent 5,164,827 in view of Jain et al. U.S. Patent 5,729,471, Hayashi et al. U.S. Patent 6,160,544 and Inanaga et al. U.S. Patent 5,590,094.

Referring to claim 16, the Paff, Jain and Hayashi references disclose all subject matter as discussed in respected claim 6, except that the Paff reference do not explicitly show the control system assigns a delay to each of said sounds signals to account for the relative distance between each microphone and the object of interest.

The Inanaga reference teaches in Figures 1 and 5, a sound controlling and reproducing system assigns a delay (by signal delaying circuit 118, See Col. 10, lines 1-2) to each of the sounds signals to account for the relative distance between each microphone (microphones 11-15) and the object of interest (e.g. the system has a sound location detection apparatus 21-22 based on the relative distance between each microphone and the object of interest to output the position signal, and delay times of audio signals read out by the reading out means in order to produce an actual audio image in accordance with the positron signals (See Col. 2, lines 1-7). The Inanaga reference is evidence the one of ordinary skill in the art at the time to see more advantage for the control system assigns a delay to each of the sounds signals to account for the relative distance between the microphone and the object of interest so that an actual audio image can be reproduced taking such edition and reproduction of sounds form a plurality of sound sources into consideration (See col. 5, lines 30-34). For that reason, it would have been obvious to the one of ordinary sill in the art at the time to modify the video camera system of Paff for providing the control system to assign a delay to each of the

Art Unit: 2615

sounds signals to account for the relative distance between each microphone and the object of interest to obtain the actual audio image as taught by Inanaga.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Ye whose telephone number is (571) 272-7372. The examiner can normally be reached on Mon-Fri 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Lin Ye', with a stylized, flowing script.

Lin Ye  
Examiner  
Technology Division 2622

March 17, 2006